INTERNATIONAL ARCH REPORT

PCT 203/01033
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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 E21B7/20

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7 E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUME	ENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
Α	US 1 870 540 A (LENNIE WELLS) 9 August 1932 (1932-08-09) page 2, line 71 - line 101; figures 1,5	1,19,21, 26	
A	US 4 253 531 A (BOROS LADISLAV J) 3 March 1981 (1981-03-03) the whole document	1,19,21, 26	
See Perti	ner documents are listed in the continuation of box C: Y - Patent family members	s are listed in annex: *** ***	

Special categories of cited documents: A' document defining the general state of the art which is not considered to be of particular relevance.	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention		
"E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	 "X" document of particular relevance; the claimed Invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family 		
O' document referring to an oral disclosure, use, exhibition or other means P' document published prior to the international filing date but later than the priority date claimed			
Date of the actual completion of the international search 16 October 2003	Date of mailing of the international search report 28/10/2003		
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentiaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Authorized officer Ott, S		

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•	Patent document cited in search report		Publication date		Patent family member(s)	Publication date
	US 1870540	Α	09-08-1932	NONE		
	US 4253531	A	03-03-1981	NONE		